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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SHINGLES, KRISTIE D

ART UNIT

PAPER NUMBER

2141

DATE MAILED: 09/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/781,522

Applicant(s)

O'ROURKE ET AL.

Examiner

Kristie Shingles

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,9-11,19 and 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,9-11,19 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Per Applicant's Request for Continued Examination:

*Claims 1, 19 and 20 have been amended. Claims 2-8 and 12-18 are non-elected.
Claims 1, 9-11, 19 and 20 are pending.*

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/01/2005 has been entered.

Claim Rejections - 35 USC § 112, second paragraph

2. Regarding Claim 19, proposed corrections to the claim language has been accepted by the Examiner. The objection and rejection under 35 U.S.C. 112, second paragraphs are therefore withdrawn.

Response to Arguments

3. Regarding Applicant's arguments with respect to the issuance of the Final Action, it is the Examiner's position that the Final Action was issued on 3/1/2005 after the Applicant's submission of Amendments After-Non-Final-Rejection filed on 10/19/2004, in which the claims

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1, 19 and 20 were amended. As stated in the conclusion of the previous [Final] Action: "Applicant's amendment necessitated the new grounds of rejection..." Accordingly the previous action was properly made final under the procedures supported by the MPEP. See MPEP § 706.07(a). Thus Applicant's arguments are non-persuasive and the request for a waiver of the Request for Continued Examination fees is denied.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims **1, 9-11, 19 and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Smith et al* (USPN 5,860,082) in view of *Tari et al* (USPN 6,765,920) further in view of *Wang* (USPN 6,477,612).

a. **Per claim 1**, A system for allocating memory for a client network address translation (NAT) pool, comprising:

- a memory pool operable to store addresses (col.3 line 55-col.4 line 8 and Abstract);
- a control block, said control block constructed and arranged to contain at least one parameter, said control block containing an address for said memory pool, said control block identifying client NAT addresses for the computer system determined prior to allocation of said memory pool (col.4 lines 25-62; provision for allocation block and memory address);
- wherein said memory pool includes a pool header having a pointer (col.6 lines 5-8 and 51-55, col.4 lines 25-48; memory regions/units and unit header); and

- wherein said memory pool includes at least one subpool header, said subpool header being pointed to by said pointer of said pool, said at least one subpool header having a pointer to a subsequent subpool header in said memory pool, said subpool header being associated with a subpool memory within said memory pool, said subpool memory having a plurality of connection blocks, each connection block being populated with a particular one of said client NAT addresses as allocated by said control block (col.5 lines 7-44, col.6 lines 1-55; provision for allocation entries with client range, allocation list and reading from memory locations);

Although *Smith et al* teach a memory pool for storing addresses, *Smith et al* fail to explicitly teach a memory pool operable to store client NAT address, each client NAT address being associated with an identity of an entity on a network. However, *Tari et al* teach the memory pool's storage of client NAT addresses, associated with client nodes on a network (col.2 lines 21-43, col.3 lines 38-53, col.5 lines 36-64, col.6 lines 33-48).

The modification of the method of *Smith et al* with *Tari et al* fails to explicitly teach wherein an individual client NAT address may be either free or allocated, but client NAT addresses remain allocated in said subpool memory until all of said client NAT addresses in said connection blocks of said subpool memory are free. However, *Wang* teaches an address range in memory cannot be spit or pieces from the range deleted, but that the unit entry in memory must be released in order to free the addresses (col.6 lines 35-43, col.10 lines 38-56, col.15 lines 6-12).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify *Smith et al* and *Tari et al* by combining the teachings of *Smith et al* and *Tari et al* with *Wang* for the purpose of keeping the range of addresses in a subpool memory, allocated, until all of the address in that memory block are de-allocated/freed, in order to retain all of the addresses of the range without freeing/deallocating individual addresses from the memory separately.

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b. **Claims 19 and 20** contain limitations that are substantially equivalent to claim 1 and are therefore rejected under the same basis.

c. **Per claim 9**, *Smith et al*, *Tari et al* and *Wang* teach the system as in Claim 1, wherein said control block has an interval list address (*Tari et al*: col.5 lines 44-64; *Smith et al*: col.4 line 49-col.5 line 13).

d. **Per claim 10**, *Smith et al*, *Tari et al* and *Wang* teach the system as in Claim 9, wherein said interval list address has at least one interval list element (*Smith et al*: col.5 lines 7-36).

e. **Per claim 11**, *Smith et al*, *Tari et al* and *Wang* the system as in Claim 10, wherein said interval list element has a pointer to a next interval list element (*Smith et al*: col.6 lines 5-19, col.10 lines 40-46, col.11 lines 53-66; *Wang*: col.6 lines 8-222).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: *Komatsu* (USPN 6,442,662), *Croft et al* (USPN 6,470,436), *Hagersten* (USPN 6,618,799), *Meyer* (USPN 6,813,645), *Munter et al* (USPN 6,243,720), *Tarui et al* (USPN 6,510,496), *Noel et al* (USPN 6,125,430) and *Hung et al* (USPN 6,904,039).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kristie Shingles whose telephone number is 571-272-3888. The examiner can normally be reached on Monday-Friday 8:30-6:00PM.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on 571-272-3880. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kristie Shingles
Examiner
Art Unit 2141

kds


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SUPERVISORY PATENT EXAMINER